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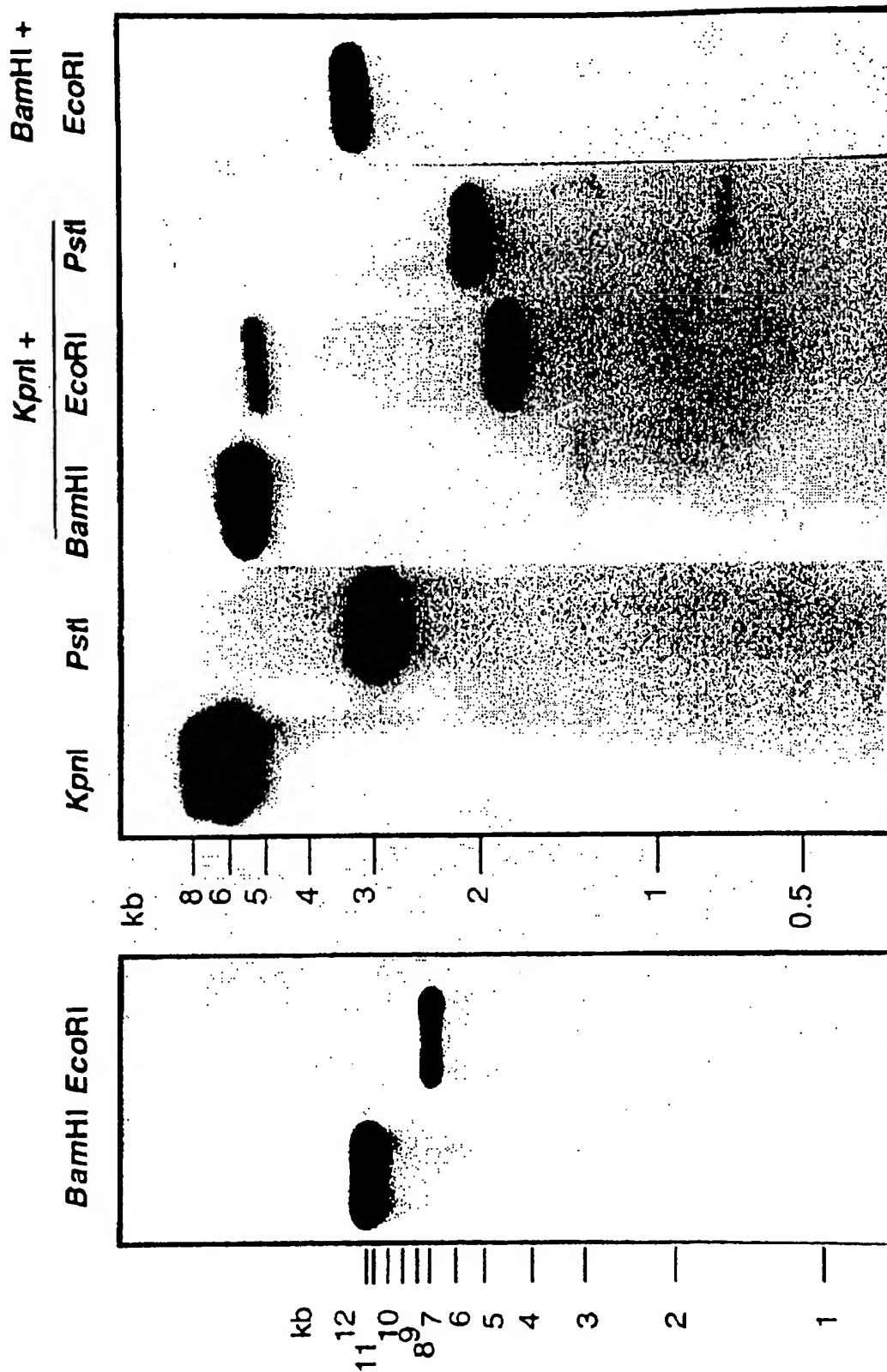


FIG. 1A

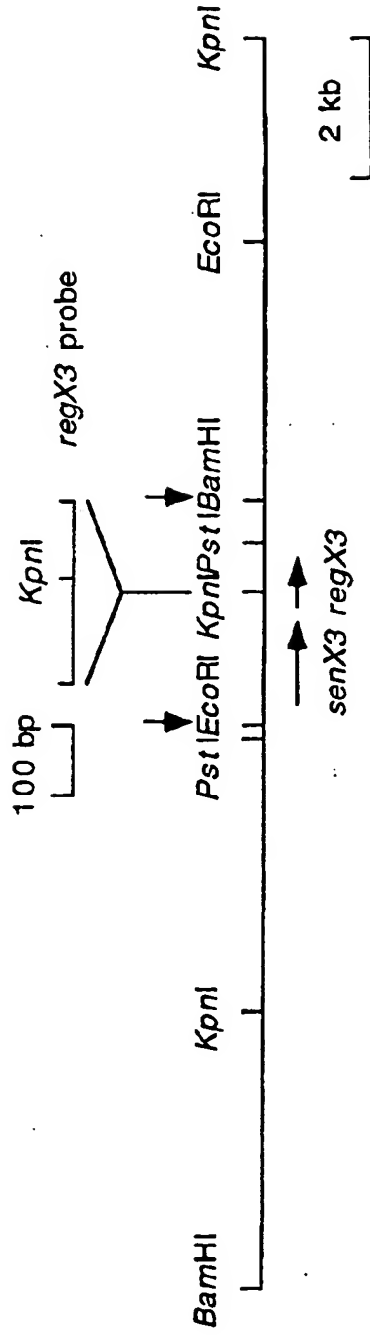


FIG. 1B

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GAATTCCGCTGCGCTACGACCTGGATTCCGCGATGAGGCCGCTGGTGCGCGGTGG 55
 I P L R Y D L D S A M R P L V R G G
 → PgaY

TACGTATCTGGACCCGGAGGCGGCAGCCCGCGCGCGGTGGCCGGCCAGGGCCG 115
 T Y L D P E A A A G A A A V A G Q G R

CGGTAATTGTTTGAGATCCACCTGCCGCGGTTTCGGCGGCTGATGGTGTGCTTTGGT 175
 G

CGCGCTGTTTGCCAAACAGCATGTGAACGGTAACCGAACAGCTGTGGCGTAGTGTGTGACT 235

TGTCCGATTTTGGCCTTGCCGCGCTAGGGCGACGTTACCCGGATTGTAGGATTTTCCTT 295

GTGACTGTGTTCTCGGCGCTGTTGCTGGCCGGGGTTTTGTCCGCGCTGGCACTGGCCGTC 355
M T V F S A L L L A G V L S A L A L A V 20
 SenX3 →

GGTGGTGTGTTTGAATGCGGCTGACGTCGCGGGTGTGCGAACAGCGCCAACGGGTGGCC 415
G G A V G M R L T S R V V E Q R Q R V A 40

ACGGAGTGGTCGGGAATCACGGTTTCGCAGATGTTGCAATGCATTGTCACGCTGATGCCG 475
T E W S G I T V S Q M L Q C I V T L M P 60

CTGGGCGCCGCGGTGGTGGACACCCATCGCGACGTTGTCTACCTCAACGAACGGGCCAAA 535
L G A A V V D T H R D V V Y L N E R A K 80

GAGCTAGGTCTGGTGCGCGACCGCCAGCTCGATGATCAGGCCTGGCGGGCCGCGCGGAG 595
 E L G L V R D R Q L D D Q A W R A A R Q 100

GCGCTGGGTGGTGAAGACGTCGAGTCCGACCTGTGCGCGCGCAAGCGGTGCGCCACGGGT 655
 A L G G E D V E S D L S P R K R S A T G 120

CGATCCGGGCTATCAGTGCATGGGCATGCCCGGTTGCTGAGCGAGGAAGACCGCCGGTTC 715
 R S G L S V H G H A R L L S E E D R R F 140

GCCGTGGTGTTCGTGCACGACCACTCGGATTATGCGCGGATGGAGGCGGCTAGGCGTGAC 775
 A V V F V H D Q S D Y A R M E A A R R D 160

TTCGTGGCCAACGTCAGTCACGAGCTCAAGACGCGCGTGGTGGCATGGCTCTACTCGCC 835
F V A N V S H E L K T P V G A M A L L A 180

↑ H

FIG.2

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GAGGCGCTGCTGGCGTCGGCCGACGACTCCGAAACCGTTTCGGCGGTTCCGCCGAGAAGGTG 895
E A L L A S A D D S E T V R R F A E K V 200

CTCATTGAGGCCAACCGGCTCGGTGACATGGTCGCCGAGTTGATCGAGCTATCCCGGCTA 955
L I E A N R L G D M V A E L I E L S R L 220

CAGGGCGCCGAGCGGCTACCCAATATGACCGACGTCGACGTCGATACGATTGTGTGCGGAA 1015
Q G A E R L P N M T D V D V D T I V S E 240

GCGATTTACGCCATAAGGTGGCGGCCGACAACGCCGACATCGAAGTCCGCACCGACGCG 1075
A I S R H K V A A D N A D I E V R T D A 260

CCCAGCAATCTGCGGGTGCTGGGCGACCAAACCTCTGCTGGTTACCGCACTGGCAAACCTG 1135
P S N L R V L G D Q T L L V T A L A N L 280
N

GTTTCCAATGCGATTGCCTATTTCGCCGCGCGGGTCGCTGGTGTGATCAGCCGTCGCCGT 1195
V S N A I A Y S P R G S L V S I S R R R 300

CGCGGTGCCAACATCGAGATCGCCGTCACCGACCGGGGCATCGGCATCGCGCCGGAAGAC 1255
R G A N I E I A V T D R G I G I A P E D 320
G1

CAGGAGCGGGTCTTTCGAACGGTTCTTCCGGGGGACAAGGCGCGCTCGCGTGCCACCGGA 1315
Q E R V F E R F F R G D K A R S R A T G 340
F

GGCAGCGGACTCGGGTTGGCCATCGTCAAACACGTCGCGGCTAATCAGACGGCACCATC 1375
G S G L G L A I V K H V A A N H D G T I 360
G2

CGCGTGTGGAGCAAACCGGGAACCGGGTCAACGTTACCTTGCTCTTCCGGCGTTGATC 1435
R V W S K P G T G S T F T L A L P A L I 380

GAGGCCTATCAGACGACGAGCGACCCGAGCAGGCGGAGAGCCCGAACTGCGGTCAAAC 1495
E A Y H D D E R P E Q A R E P E L R S N 400

AGGTCACAACGAGAGGAAGAGCTGAGCCGATGACCTGCGCCGACGACGATGCAGAGCGTA 1555
R S Q R E E E L S R 410

FIG. 2

(cont.)

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GCGATGAGGTGGGGGCACCACCCGCTTGCGGGGGAGAGTGGCGCTGATGACCTGCGCCGA 1615
 CGACGATGCAGAGCGTAGCGATGAGGTGGGGGCACCACCCGCTTGCGGGGGAGAGTGGCG 1675
 CTGATGACCAGTGTGTTGATTGTGGAGGACGAGGAGTCGCTGGCCGATCCGCTGACGTTT 1735
 M T S V L I V E D E E S L A D P L T F 19
 RegX3 →
 CTGCTGCGCAAGGAGGGCTTTGAGGCCACGGTGGTGACCGATGGTCCGGCAGCTCTCGCC 1795
 L L R K E G F E A T V V T D G P A A L A 39

 GAGTTCGACCGGGCCGGCGCCGACATCGTCTGCTCGATCTGATGCTGCCTGGGATGTGC 1855
 E F D R A G A D I V L L D L M L P G M S 59
 ↑
 GGTACCGATGTATGCAAGCAGTTGCGCGCTCGGTCCAGCGTTCCGGTGATCATGGTGACC 1915
 G T D V C K Q L R A R S S V P V I M V T 79

 GCCCGGGATAGCGAGATCGACAAGGTGGTCCGGCTGGAGCTGGGCGCTGACGACTACGTG 1975
 A R D S E I D K V V G L E L G A D D Y V 99

 ACCAAGCCCTATTCGGCACGCGAGTTGATCGCACGCATCCGCGCGGTGCTGCGCCGTGGC 2035
 T K P Y S A R E L I A R I R A V L R R G 119

 GGCGACGACGACTCGGAGATGAGCGATGGCGTGCTGGAGTCCGGGCCGGTTCGCATGGAT 2095
 G D D D S E M S D G V L E S G P V R M D 139

 GTGGAGCGCCATGTCGTCTCGGTGAACGGTGACACCATCACGCTGCCGCTCAAGGAGTTC 2155
 V E R H V V S V N G D T I T L P L K E F 159

 GACCTGCTGGAATACCTGATGCGCAACAGCGGGCGGGTGTGACTCGCGGACAACCTGATC 2215
 D L L E Y L M R N S G R V L T R G Q L I 179

FIG. 2

(cont.)

GACCGGGTCTGGGGTGCGGACTACGTGGGCGACACCAAGACGCTCGACGTCCATGTCAAG 2275
D R V W G A D Y V G D T K T L D V H V K 199

CGGCTGCGCTCCAAGATCGAAGCCGACCCGGCTAACCCGGTTCACTTGGTGACGGTGCGC 2335
R L R S K I E A D P A N P V H L V T V R 219

GGGCTGGGCTACAACTCGAGGGCTAGCGGACGCCGACAACCTTGGCGACTGTCTGGTCTG 2395
G L G Y K L E G 227

GCTACGGCCAGTGCCATCGCCATGATGGACAGCTGCGGGTTCACTTCCGGGCAGCTGGGC 2455

AGGATCGAGGCGTCGGCAACCCACACGCCCTCGACGCCGCGCAGCCGGCCCGTCGCGTCG 2515

ACCGGACAAAGCTGCTCGTCGGCGCCGGCGGCCGCGGTGCCCGTCGGATGGAAGGCGGCC 2575

AGGTGCAGGCTTCTGGGGTTGGCTCGGCGCAGCACATCCTGCAGCTCGGGCAGGGACCGC 2635

ATCGGTGGGGGCCCGGGGATACCGGTGAGCACCTCCACCGCGCCGGCGGCAAAGAACAGC 2695

CGGCCAATGGCCTGCAGCGCGACCCGTAGCTTGGCGATCTCACCTGGAGCTATGTCATAG 2755

CGCACCACCGTCTCGCCGCGCACCGACCGACCGTGCCGACGCCCCGATCGGCCACCATC 2815

GCCCCGAATGTTGCGATCTGCGGCGCCCGGTGAGCCAGCGGAGCAGCTCGGCCCCGTAG 2875

CCGGGGAAGACCATCGACCCCATGCCCGCGGTGTGGAGGTGGCCTCGATCAGCACGCCG 2935

TCGGATTCGTGAAACTCGTGAACCGCCGCGCTCTGCAGCACCCCGCGCCACGCGAAGACG 2995

TCGTGTCGAAGAGCCCGGCCAGCATAGTTGCCGGGTGCAGCGCAAGGTTGTGGCCCACT 3055

CGCGGTGCCCACCAAGACCGCTGCGCCGCAACAGCCCTGGCGTCTCCGTGCGACCGGGCG 3115

CGACGACGACCGCGTCGGCCAGCACGTGAGTGTGGTGCCGTGCGGCCGCGGGGCTCGCA 3175

CGCCATAGGCCCCGCGCGGTGCAGGATCC 3208

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FIG.2

(cont.)

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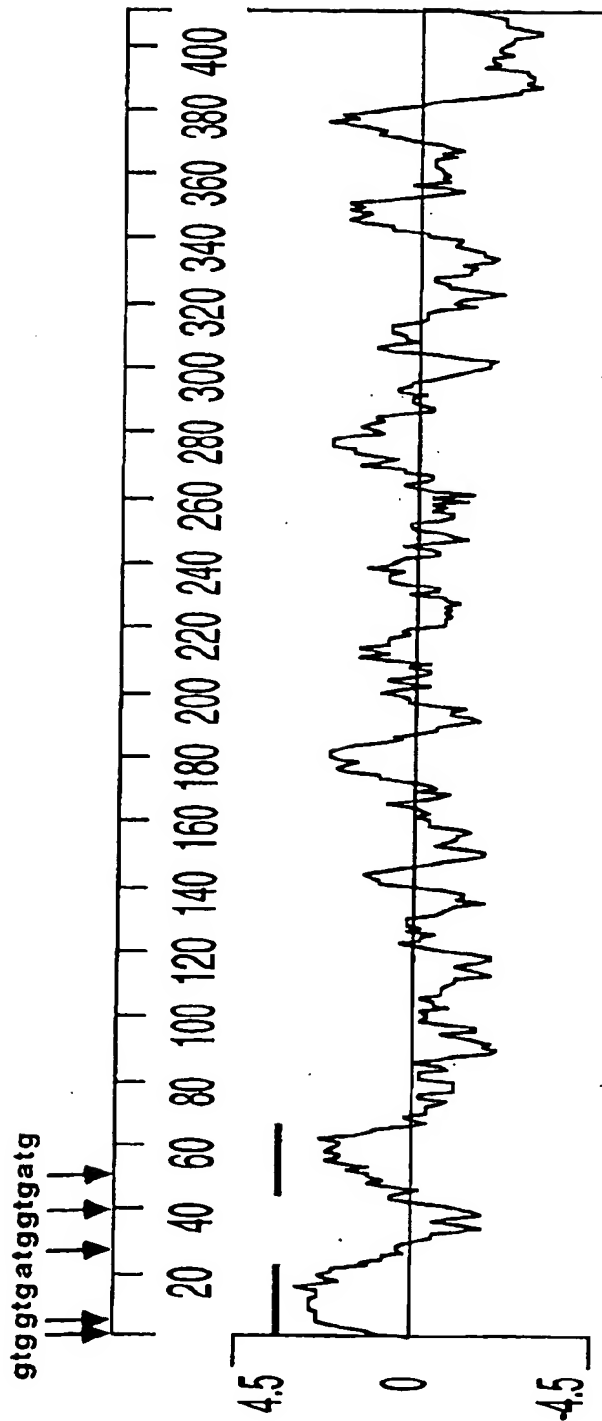


FIG. 3

A. BCG

GCT GAG CCG ATG ACC TGC GCC GAC GAC GAT GCA GAG CGT AGC GAT
 M T C A D D D A E R S D
 senX3 → L S R *

 GAG GTG GGG GCA CCA CCC GCT TGC GGG GGA GAG TGG CGC TGA TGA
 E V G A P P A C G G E W R * *

 M T
 CCT GCG CCG ACG ACG ATG CAG AGC GTA GCG ATG AGG TGG GGG CAC

 C A D D D A E R S D E V G A P
 CAC CCG CTT GCG GGG GAG AGT GGC GCT GAT GAC CAG TGT

 P A C G G E W R * * M T S V → regX3

B. *Mycobacterium tuberculosis*

GCT GAG CCG ATG ACC TGC GCC GAC GAC GAT GCA GAG CGT AGC GAT
 M T C A D D D A E R S D
 senX3 → L S R *

 GAG GTG GGG GCA CCA CCC GCT TGC GGG GGA GAG TGG CGC TGA TGA
 E V G A P P A C G G E W R * *

 M T
 CCT GCG CCG ACG ACG ATG CAG AGC GTA GCG ATG AGG TGG GGG CAC

 C A D D D A E R S D E V G A P
 CAC CCG CTT GCG GGG GAG AGT GGC GCT GAT GAC CTG CGC CGA CGA

 P A C G G E W R * * M T C A D D
 CGA TGC AGA GCG TAG CGA TGA GGA GGA GTG GCG CTG ATG ACC AGT
 M T S → regX3
 D A E R S D E E E W R * *

FIG. 4

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

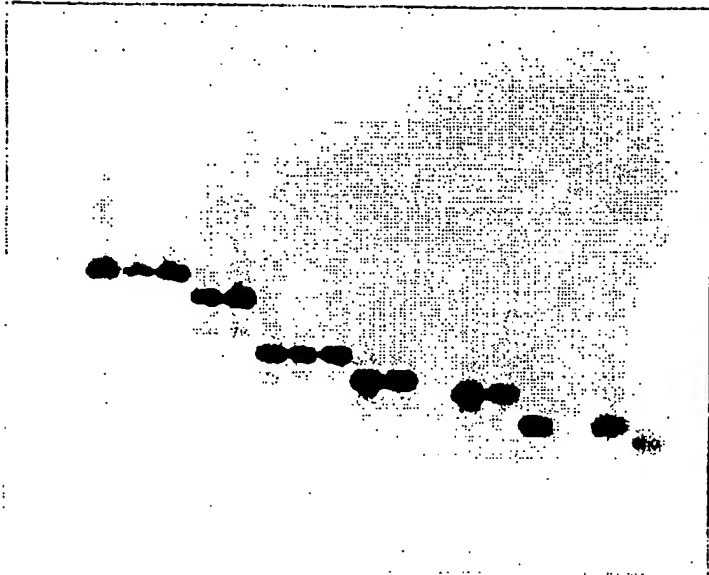


FIG.5

FIG.7

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

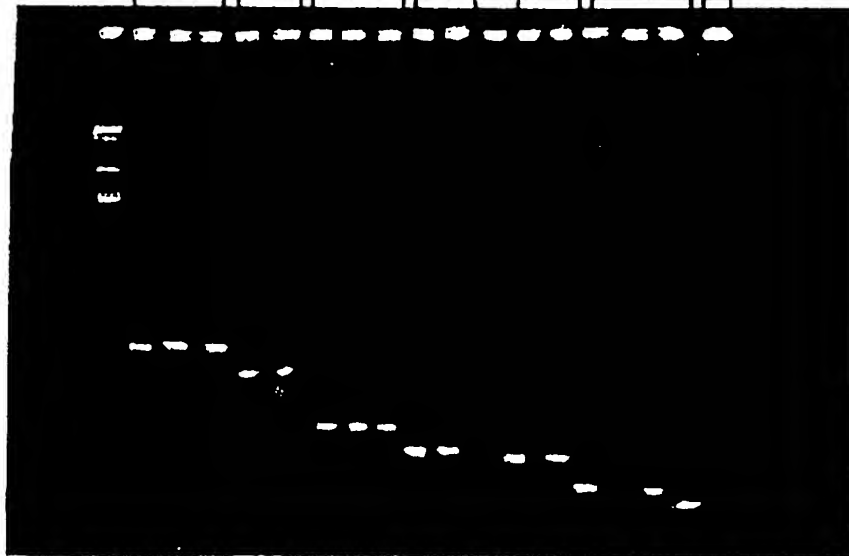


FIG.6

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